



# Maryland Extreme Cold Emergency Plan Version 1.0

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Attachment A: Local Health Department Contact Information

Attachment B: Press Release Templates

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## Summary

### *Purpose*

The Maryland State Cold Weather Emergency Plan, developed by the Maryland Department of Health and Mental Hygiene (DHMH), guides DHMH-- actions during an extreme cold event, as defined below. This plan also provides guidance for Local Health Departments (LHDs) to support them as they fulfill their roles, however it does not mandate that LHDs perform the suggested actions described.

### *Definitions*

*Extreme Cold Event* – An extreme cold event is a weather condition with excessively low temperatures or a combination of cold temperatures and wind that has the potential to cause cold-related illnesses or injuries. An extreme cold event is defined in hours, a day or series of days when:

- The minimum temperature or wind chill is forecasted to be approximately -5°F or lower,
- Weather or environmental conditions are such that a high incidence of cold-related illnesses or injuries can reasonably be expected.

*Complex Cold Emergency* – A Complex Emergency is a condition of an Extreme Cold Event with complications requiring additional response. Examples of such complications are power shortages, heavy precipitation (snow or ice) or an extended period of low temperatures combined with strong winds.

*Warming centers and Sheltering* – The actual definition of a ‘warming center’ may vary from county to county. For the purposes of this plan, a warming center refers to a public building with heat, water and sanitation facilities. However, due to the coldest temperatures occurring overnight, sheltering the homeless is the primary concern in sheltering operations. Sheltering operations may also be employed or expanded during winter storms to reduce the risk to vulnerable populations. Warming centers and shelters will be referred to in this plan as simply ‘shelters’.

*Wind Chill* – Wind Chill or the apparent temperature is a measure of what the temperature actually feels like. Wind Chill is a factor of both the actual temperature and wind speed, and is the best indicator for a pending extreme cold event. Wind Chill is the key indicator of Extreme Cold by the National Weather Service.<sup>1</sup>

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<sup>1</sup> <http://www.weather.gov/om/windchill/index.shtml>

*Wind Chill Advisory* - The National Weather Service issues this product when the wind chill could be life threatening if action is not taken. In Maryland wind chill advisories are issued when wind chill temperatures are forecasted to range from -5°F to -20°F.

*Wind Chill Warning* - The National Weather Service issues this product when the wind chill is life threatening. In Maryland wind chill warnings are issued when wind chill temperatures are forecasted to be below -20°F.

*Cold-related Illness* – A Cold-related Illness is a condition caused by extreme cold, usually hypothermia medical condition exacerbated by the cold. Hypothermia is likely at lower temperatures when the subjects are wet due to rain, fog or snow. For the purposes of this plan, Cold-related injuries will be referred to as cold-related Illness.

*Hypothermia* – When exposed to cold and the mechanisms are unable to replenish the heat that is being lost, a drop in body's core temperature occurs; causing systems such as shivering and mental confusion.

*Cold-related Injury* – A Cold-related Injury is damage caused by extreme cold, which is known as frostbite. Like hypothermia, frostbite is likely at lower temperatures when the subjects are exposed to the cold as well as being wet due to rain, fog or snow.

*Frostbite* – Frostbite is the medical condition where localized damage is caused to skin and other tissues due to extreme cold.

*Carbon Monoxide Poisoning* – Due to the prevalence of heaters and fuel-burning devices during the winter, Carbon Monoxide poisoning presents the greatest risk during the winter months.<sup>2</sup>

*High-Risk Groups* – High-Risk Groups are populations that are disproportionately affected by Extreme Cold. These groups include babies sleeping in cold rooms, elderly people with inadequate food, clothing or heating, people who remain outdoors for long periods (homeless, hunters, hikers, etc.), people who drink alcohol or use illegal drugs.

## **Phase 1: Pre-Winter**

Pre-winter activity occurs in the fall before temperatures begin to drop. Based on temperature data collected at the Baltimore-Washington International Thurgood Marshall Airport (BWI) and ESSENCE data on Heat-related Illnesses, temperatures in Maryland can begin to drop around early November, although extreme cold events don't usually begin until early December. However, it is important to begin preparing for these events early to ensure all partners are ready to activate during the first extreme cold event.

### ***Maryland Law Regarding Winter Power Termination***

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<sup>2</sup> <http://www.crh.noaa.gov/oax/safety/carbonmon.php>

Maryland Law (COMAR 20.31.03.03) forbids utility companies from terminating the power of an occupied residential building for non-payment of bills without submitting an affidavit to the Public Service Commission that the termination does not constitute a threat to the life or health of the residential occupants. In addition, PSC forbids in termination for non-payment of bills on any day which the forecast temperature made at 6 a.m. is 32 degrees Fahrenheit or below, through the extreme weather period.

### ***Triggers***

- Pre-winter activities begin in October.

### ***Surveillance***

- The National Weather Service (NWS) determines the cold impact in the forecast. The Maryland Emergency Management Agency (MEMA) monitors data from the Sterling, Pittsburgh, Mt. Holly and Wakefield NWS stations.
- DHMH conducts daily analysis of syndromic surveillance data from hospital emergency departments for indications of an increase in cold-related illness.

### ***State Actions***

- Conduct an annual review of the Maryland Cold Weather Emergency Plan and revise and update as necessary. Plan revisions may include but not be limited to:
  - Coordinate and conduct a conference call with State Partners to review and update planning efforts.
  - Obtain updated shelter contact information where applicable.
- Provide guidance and recommend best practices to aid jurisdictions in revising local Cold Weather Emergency Plans as requested.
- Update the DHMH website and social media outlets to include accurate LHD contact information.
- Distribute the revised Cold Weather Emergency Plan to LHDs and partners by the third week of November.

### ***Suggested Local Actions***

- Consider conducting an annual review of the jurisdiction's plan:
  - Revise and update local surveillance and communications plans.
    - Prepare generic press releases and local website pages.
  - Review and revise information pertaining to vulnerable populations.
  - Review and revise existing sheltering plans.
  - Review and revise available transportation programs for providing transportation assistance to shelters.
- Provide DHMH with information on sheltering plans and other resources
- Identify and renew expectations of local partners regarding operations activities and actions during an extreme cold event.

- Identify a standard protocol for cancelling large public outdoor events and coordinate with organizations that hold large outdoor events.

### ***Public Information (Both State and Local)***

- As needed revise written and electronic public information materials:
  - Jointly, with MEMA and MIEMSS, reach out proactively to media outlets to initiate early messaging for public awareness.
  - Messaging should also be clear and targeted to High-Risk Populations and contain a list of available options, such as call-in numbers for the locations of shelters.
  - Public Education focus will be on limiting exposure to Frostbite, Hypothermia and Carbon Monoxide risks.
- Jurisdictions should consider establishing communications partnerships and distribute basic information to our Emergency Support Function 8(ESF-8) partners and stakeholders including MEMA, pharmacists, physicians, mail carriers, police, EMS and firefighters.
- Agencies should consider reviewing and conducting employee programs to educate their staff on:
  - Their respective agency Extreme Cold Weather Emergency Plans.
  - Modified work rest schedules especially for those employees working in cold environments.
  - Recognition of cold-related illness.
  - Immediate interventions once a cold-related illness is recognized.
  - Preventive steps against the development of cold related illnesses.
  - This is especially important for those state agencies with staff routinely working out of doors.

## **Phase 2: Launch of Extreme Cold Season**

Maryland should be prepared to launch Extreme cold Event activities by December 1<sup>st</sup>. The Launch of the Extreme Cold Season is for the purposes of public messaging on cold-related illness.

### ***Triggers***

- DHMH and Jurisdictions should consider holding press conferences on or just prior to the day of the first forecasted extreme cold event, or;
- DHMH and Jurisdictions should hold a press conference by the third week in November if no extreme cold events have occurred.

### ***Surveillance***

- State and local agencies should monitor weather forecasts for the possibility of predicted weather conditions consistent with extreme cold.



- DHMH will distribute weekly reports and analysis of the public health impact of cold related illnesses. These reports will include but may not be limited to:
  - Temperature data via the National Weather Service and MEMA
  - Emergency Department visits for Cold-Related Illness through DHMH's syndromic surveillance system.
  - Number of cold-related deaths reported by the Office of the Chief Medical Examiner (OCME).
  - Number of Carbon Monoxide deaths reported by OCME.
  - Emergency Responses for Cold-related illness as reported by the Maryland Institute for Emergency Medical Services Systems (MIEMSS) Statewide Electronic EMS Data System. (Functional by the end of 2011)
  - Cold Advisory Reference Information.

### ***State Actions***

- DHMH and jurisdictions should consider holding press conferences on or just prior to the day of the first extreme cold event or by the third week in December if no extreme cold events have occurred.
- Coordinate with partner organizations (MEMA and MIEMSS) to provide information on activities and programs via the media.
- DHMH and jurisdictions should make revised public education materials available to outside organizations, the media and the general public.
  - Public Education Materials include a standard Cold Emergency Brochure, Cold-Related Illness Fact Sheets, Carbon Monoxide Fact Sheets and Cold Emergency Recommendations for Schools, Child Care Centers, Sports and Youth Programs, Parks and Recreational Programs, Day Camps, Sleepover Camps, Employers with outside workers (Including work-rest cycles).
- DHMH Office of Healthcare Quality will contact nursing homes to promote winter preparedness, reminding them to check their generators and HVAC systems as well as to remind them to report real or potential concerns and issues
- Update DHMH website with LHD phone numbers and information.

### ***Suggested Local Actions***

- Jurisdictions should consider using their 911 and Emergency Medical Dispatch systems to track the number of cold-related illness emergency calls.
- Consider designating an agency or office to monitor weather forecasts for temperature, wind and humidity. Select a single reliable forecast source that can provide accurate data and forecasts one to five days in advance.
- Jurisdictions should consider developing criteria for a list of individuals vulnerable to cold related health issues. Consider establishing a voluntary local list that can be used in mobilizing community leaders to check on vulnerable individuals in Phase 4.
- Begin pushing Pet Preparedness. Resources can be found at Ready.gov<sup>3</sup>.

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<sup>3</sup> <http://www.ready.gov/america/getakit/pets.html>

- Establish a team for responding to extreme cold events – It may include LHD, Local Emergency Management, Red Cross, etc.

## **Phase 3: Extreme Cold Events**

### ***Triggers***

- Predicted or actual weather conditions meet the criteria for an extreme cold event as defined above

### ***State Actions***

- Notification and Communications
  - DHMH will issue a Cold Advisory, preferably by 6:00 am for the state or jurisdiction expected to be impacted by an extreme cold event.
    - Advisory will be sent to local health officers, emergency managers, etc.
  - The DHMH advisory will also be sent to other state agencies.
  - DHMH may chose to make the advisory public through release to media outlets, posting on select state agency websites and other means deemed appropriate including social media.
  - DHMH will communicate and provide outreach to ESF-8: Public Health and Medical partners through Maryland's HC Standard / Facilities Resource Database programs. Communications may include:
    - Advisories and Alerts
    - Situation Reports and Updates
    - Requests for resource inventory and needs
    - Monitoring of health care and medical operational status and operations
- DHMH will continue to monitor syndromic surveillance systems and issue the weekly report outlined in Phase 2 (use Attachment F as a template).
- DHMH will coordinate with MEMA to attempt to alleviate the impact of power outages on high risk populations, such as nursing homes.
- DHMH will coordinate with MIEMSS to issue Facility Resource Emergency Database (FRED) alerts when appropriate.
- DHMH will review and revise this plan following any Extreme Cold Events or as requested by senior officials.

### ***Suggested Local Actions***

- Monitor surveillance of problems and gauge the potential impact of the anticipated event.
- Notify local Extreme Cold Event Partners.
- Provide DHMH with updated information on shelters.
- Jurisdictions should consider activating their sheltering plans.
- Jurisdictions should consider opening shelter operations for overnight warming.
- Jurisdictions should consider activating transportation assistance programs.

- Consider suspending water utility shut-offs for occupied buildings.
- Consider recommending canceling, rescheduling or heightened mitigation protections for outdoor public events.
- Consider extending the hours of operation at community centers with indoor heating.
- Jurisdictions should consider arranging for extra staffing and emergency support services.
- Coordinate with relevant organizations to provide water to homeless populations and at designated locations (such as shelters).
- Consider coordinating responses with public access numbers.
- Jurisdictions should consider recommending the cancellation of large outdoor gatherings or provide information on mitigating the threat (such as venues allowing access to heated spaces).
- Recommend including heat advisory warnings with all winter event permits.
- Recommend government and schools restrict outdoor activities.
- Recommend employers of outdoor workers schedule shifts to mid-day to take advantage of peak heat during the day.
- Jurisdictions should provide all call centers (911, 211, hospital and private ‘Ask a Nurse’ lines) information on shelters and transportation options.
- Recommend employing consistent messaging urging individuals to check on elderly neighbors and family members.
  - If possible, recommend the usage of reverse-911 systems by local jurisdictions to contact at-risk and vulnerable populations and provide cold advisory warnings.
- Send DHMH Information on public gatherings or events of note.
- Coordinate with local fire departments for fire prevention and carbon monoxide public education.

### ***Public Information***

- DHMH will coordinate with each jurisdiction on Extreme Cold Event communications.
  - DHMH will support jurisdictions wishing to take the lead on communications activities.
  - DHMH will send its cold advisory to local media outlets by 6 am each day for jurisdictions that do not wish to take the lead on communications.
- Jurisdictions taking the lead on communication should notify local press by 6 am each day.
- Both the State and jurisdictions should update social media and departmental websites to reflect cold advisory and provide health warnings and recommendations.
- Coordinate public health broadcasts of information about the anticipated timing of the event.
  - Include information about the severity and duration of extreme cold event conditions and recommendations to go to seek a warm place or a designated shelter and to avoid overexertion.
- DHMH will make available for distribution targeted public information/education materials for:
  - Physicians,
  - Pharmacists,

- Federally Qualified Health Centers (FQHCs),
- Community Groups,
- Religious Organizations,
- Supermarkets.

## **Phase 4: Complex Winter Emergency**

A Complex Emergency is a condition of an extreme cold event with complications requiring additional response. Examples of such complications are water or power shortages, an extended period of extremely low temperatures, low temperatures coupled with strong winds or severe precipitation during extreme cold. Complex Winter Emergencies may be local, regional or statewide

### ***Triggers***

- State and local authorities will use discretion in deciding that conditions constitute a complex emergency, which may include:
  - Significant power or water outages, or;
  - Extended periods of low temperatures, or;
  - Excessively low temperatures with a Wind Chill of -5°F, or;
  - Severe precipitation during a cold event, or;
  - Any other factors that would exacerbate a cold emergency.

### ***State Actions***

- Conduct conference calls to discuss potential impact of event.
- Begin issuing the Cold-Related Illness Surveillance Report on a daily basis.
- Coordinate with MEMA to activate multi-jurisdictional response.
  - DHMH will consider extraordinary steps in managing the emergency.
- Consider activating emergency plans to scale response, activate winter weather plans as necessary.
- Consider opening state shelters.
- Consider coordinating with local jurisdictions to supplement response.

### ***Suggested Local Actions***

- Notify DHMH and MEMA if there is a scheduled event.
- Consider opening additional shelters and extending hours.
- Consider contracting for heating tents.
- Consider revoking permits for mass gatherings or other events that would put the population at undue risk.
- Consider providing heating resources to areas without power.
- Consider distributing heaters to vulnerable populations without heat, if resources are available.

- Consider mobilizing neighborhood leaders to check on and assist vulnerable individuals in targeted locations.
- Consider coordinating with Emergency Management to activate CERT teams to check on neighbors and/or pass out supplies.
- Consider actively seeking out the homeless population and ensure they have a warm place to stay.
- Consider activating or expanding sheltering plans.
- Consider opening a temporary emergency center for areas that may be without water or power for an extended period of time.
- Consider coordinating with local emergency management officials and power companies to minimize impact on nursing facilities and assisted living providers.
- Consider public transportation as a heating method for vulnerable groups or to transport them to a shelter.

### ***Water Shortages***

- In the event of a widespread and/or prolonged water shortage, the Jurisdiction's Health Department and the Department of Public Works should consider providing alternative potable water to affected residents. Resources can also be requested through local EMA.
- Consider requesting assistance from the private sector in providing and distributing free water.

## **Phase 5: Post-Winter**

The post winter activities typically begin in mid-March and include After Action Reporting and planning for the next operational period.

### ***Triggers***

- Post-winter activities begin in March.

### ***State Actions***

- DHMH ceases circulating weekly cold reports in March.
- Where applicable, collect After Action Reports from the jurisdictions and determine best practices to be included in the following year's planning efforts.
- Collect, analyze and release statewide surveillance data from the winter for use in future cold planning.
- Review and update State Cold Plan, including a comprehensive review of local plans and resources, to be completed and posted by October 1<sup>st</sup>.

### ***Suggested Local Actions***

- Cease cold-event monitoring and return shelters to normal hours if applicable.

- Coordinate with DHMH on an annual cold plan review.
- Identify organizations serving high-risk populations that can be utilized in following season.
- Develop or revise information on high-risk individuals.
- Create voluntary registries for individuals, families and neighbors.
- Develop or revise an accessible record on facilities and locations.
- Conduct an evaluation of interventions:
  - Review evaluation tools to monitor effectiveness
    - Shelter usage
    - Transportation program usage, if available
    - EMS System usage